KARNATAKA STATE ROAD TRANSPORT CORPORATION

Mechanical Engineer Department

Central Offices, BENGALURU – 560 027

Specifications for Polyurethane Sealants for Bus Body application **Dated: 14.10.2022**

Sl.No.	Description	Requirement
1	**Weathering resistant polyurethane sealant for metal to metal sealing:**	
	Requirement: Multi Purpose, Non Sag , Single part plastic, highly resistant to UV radiation, fast curing, polyurethane based adhesive sealant which cures on exposure to atmospheric moisture to form a high performance permanently flexible non sag adhesive sealant. Good resistance to weathering and ageing. Sealant should comply to EN45545 Standard and manufacturer should provide a test certificate for the same.	
	Technical Product Data:	
1.1	Chemical Base	One Part Polyurethane
1.2	Cure Mechanism	Moisture Curing Polyurethane
1.3	Density (DIN 53479) (Uncured)	1.10 to 1.40 gm/cc ,
1.4	Skin Time @ 23 degree C and 50 % RH	20 to 60 minutes so that tooling is possible
1.5	Curing at 23°C / 50 %RH	3mm/ 24 Hrs
1.6	Hardness Shore A (DIN 53504)	35 to 55
1.7	Elongation at Break (DIN 53504)	300% Minimum
1.8	Tensile Strength (DIN 53504)	1.6 N/mm^2 Minimum
1.9	Application Temperature	+5°C to +40°C
1.10	Service temperature	-40°C to +90°C
1.11	Colour	Black /White
1.12	Shelf Life (Stored below 23 degree C)	9 Months from the date of manufacturing or 5 months from the date of deliveries.
2	**Weathering resistant polyurethane sealant for metal to ceramic frit glass:**	
	Requirement: Multi Purpose, Non Sag , Single part plastic, highly resistant to UV radiation, fast curing, polyurethane based adhesive sealant which cures on exposure to atmospheric moisture to form a high performance permanently flexible non sag adhesive sealant. Good resistance to weathering and ageing. Sealant should comply to EN45545 Standard and manufacturer should provide a test certificate for the same.	
	Technical Product Data:	
2.1	Chemical Base	One Part Polyurethane
2.2	Cure Mechanism	Moisture Curing Polyurethane
2.3	Density (DIN 53479) (Uncured)	1.20 to 1.40 gm/cc
2.4	Skin Time @ 23 degree c and 50 % RH	20 to 60 minutes so that tooling is possible
2.5	Curing at 23°C / 50 %RH	3mm/ 24 Hrs
2.6	Hardness Shore A (DIN 53504)	35 to 60
2.7	Elongation at Break (DIN 53504)	300% Minimum
2.8	Tensile Strength (DIN 53504)	4N/mm^2 Minimum
2.9	Application Temperature	+5°C to +35°C
2.10	Service temperature	-40°C to +90°C
2.11	Colour	Black
2.12	Cleaner or Activator	Isopropanol in aqueous solution
2.13	Primer	Black- Single Step Primer
2.14	Fire Norms	Shall meet EN45545 fire norms (Suppliers to enclose EN 45545 certificate)
2.15	Shelf Life (Stored below 23 degree C)	9 Months from the date of manufacturing or 5 months from the date of deliveries.